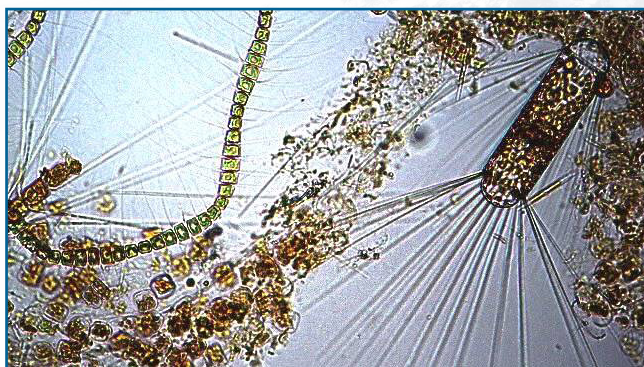


# FjordPhyto



## Background

Phytoplankton are microscopic, plant-like creatures that live in the ocean and use sunlight as well as nutrients to produce energy via photosynthesis. They are the foundation of the food web, providing a food resource for everything from microscopic, animal-like zooplankton to seals, penguins and multi-ton whales. They play a critical role in the global carbon cycle, drawing carbon dioxide out of the atmosphere and into the deep ocean. Phytoplankton also contribute to over half of the Earth's oxygen – more than all the trees and plants on land combined! Over the past 40 years, the Antarctic Peninsula has experienced some of the fastest warming rates on the planet. Warming temperatures cause ice and glaciers to melt, and this melted fresh water drains into the fjords, changing the ocean chemistry and potentially the phytoplankton community. FjordPhyto [www.fjordphyto.org](http://www.fjordphyto.org) is a Citizen Science project relying on data collected by Antarctic travellers as they visit various fjords along the Antarctic Peninsula throughout the austral summer. By collecting phytoplankton throughout the entire summer season, citizen scientists can help researchers understand how melted glacial water can influence and change the population of phytoplankton in fjords and what impact this might have on the polar coastal ecosystem.

## How can you/guests participate?

FjordPhyto is a fantastic project to engage guests in the hands-on scientific sampling process to collect phytoplankton from fjords along the Antarctic Peninsula using some of the same techniques as oceanographers. Sampling takes approximately one hour and can be done as part of a Zodiac cruise or landing stop. There is a master list of GPS coordinates for multiple fjords of interest.

The project should be led by an expedition staff member, who will help guests record data and collect phytoplankton. The leading expedition staff member is responsible for making sure samples are labelled and stored properly as well as data sheets are filled in correctly. Recorded data should be scanned and sent via email to FjordPhyto Lead scientist Allison Cusick (see contact info below). Physical sample transfer back to the USA will be coordinated between Allison and the leading expedition staff member.



